

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NM-178-AD; Amendment 39-13512; AD 2004-05-17]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135 and -145 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to all Model EMB-135 and -145 series airplanes, that currently requires repetitive inspections to detect discrepancies of both vertical-to-horizontal stabilizer bonding jumpers and the connecting support structure, and corrective action if necessary. This amendment requires modification of the bonding jumpers, including the installation of a protective cover to the elevator control cables, which terminates the requirements of the existing AD. The actions specified by this AD are intended to prevent damaged or severed bonding jumpers, which, in the event of a lightning strike, could result in severed elevator control cables and consequent reduced elevator control capability and reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective April 14, 2004.

The incorporation by reference of EMBRAER Service Bulletin 145-55-0028, Revision 02, dated February 27, 2003, as listed in the regulations, is approved by the Director of the Federal Register as of April 14, 2004.

The incorporation by reference of EMBRAER Alert Service Bulletin 145-55-A028, dated April 10, 2002, as listed in the regulations, was approved previously by the Director of the Federal Register as of May 16, 2002 (67 FR 21572, May 1, 2002).

The incorporation by reference of EMBRAER Alert Service Bulletin 145-55-A025, dated June 5, 2001, as listed in the regulations, was approved previously by the Director of the Federal Register as of September 5, 2001 (66 FR 43768, August 21, 2001).

ADDRESSES: The service information referenced in this AD may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil. This information may be examined at the Federal Aviation Administration (FAA), Transport

Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1175; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2002-08-21, amendment 39-12733 (67 FR 21572, May 1, 2002), which is applicable to all EMBRAER Model EMB-135 and -145 series airplanes, was published in the Federal Register on December 3, 2003 (68 FR 67613). The action proposed to require repetitive inspections to detect discrepancies of both vertical-to-horizontal stabilizer bonding jumpers and the connecting support structure, corrective action if necessary, and modification of the bonding jumpers, including the installation of a protective cover to the elevator control cables, which would terminate the repetitive inspections.

Comments

We provided the public the opportunity to participate in the development of this AD. No comments have been submitted on the proposed AD or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Cost Impact

This AD affects about 360 airplanes of U.S. registry.

The actions that are currently required by AD 2002-08-21 take about 2 work hours per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the cost impact of the currently required actions on U.S. operators is estimated to be \$46,800, or \$130 per airplane, per inspection cycle.

The terminating action required by this AD will take about 6 work hours per airplane, at an average labor rate of \$65 per work hour. Required parts will cost about \$206 per airplane. Based on these figures, the cost impact of the requirements of this AD on U.S. operators is estimated to be \$214,560, or \$596 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-12733 (67 FR 21572, May 1, 2002), and by adding a new airworthiness directive (AD), amendment 39-13512, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-05-17 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-13512.
Docket 2002-NM-178-AD. Supersedes AD 2002-08-21, Amendment 39-12733.

Applicability: All Model EMB-135 and -145 series airplanes; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent damaged or severed bonding jumpers, which, in the event of a lightning strike, could result in severed elevator control cables and consequent reduced elevator control capability and reduced controllability of the airplane, accomplish the following:

Restatement of Requirements of AD 2002-08-21

Inspection of the Bonding Jumpers

(a) For airplanes subject to the requirements of AD 2001-17-04, amendment 39-12395 (which was superseded by AD 2002-08-21, amendment 12733): Except as provided by paragraph (f) of this AD, within the next 100 flight hours after September 5, 2001 (the effective date of AD 2001-17-04), perform a detailed inspection to determine if the two bonding jumpers that connect the horizontal to the vertical stabilizers are properly installed, per EMBRAER Alert Service Bulletin 145-55-A025, dated June 5, 2001.

Note 1: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Follow-on Action

(b) For airplanes subject to the requirements of paragraph (a) of this AD: If both bonding jumpers are installed properly, before further flight, determine if the jumpers are mechanically tensioned to a slack distance of 5 millimeters (mm) or less between the reference line and the jumper as specified in View E of EMBRAER Alert Service Bulletin 145-55-A025, dated June 5, 2001.

(1) If any slack distance is 5 mm or less, before further flight, replace the bonding jumper with a new jumper having part number (P/N) LN926416X165, per the alert service bulletin.

(2) If any slack distance is 6 mm or more, at the time specified in paragraph (d) of this AD, accomplish those actions specified in paragraph (d) of this AD.

Corrective Actions

(c) For airplanes subject to the requirements of paragraph (a) of this AD: If either bonding jumper is not installed properly (e.g., misaligned, signs of previous elongation, or damage), before further flight, replace the bonding jumper with a new jumper having P/N LN926416X165, per EMBRAER Alert Service Bulletin 145-55-A025, dated June 5, 2001.

Inspection of the Connecting Supports

(d) For airplanes subject to the requirements of AD 2001-17-04: Within the next 100 flight hours after September 5, 2001, perform a detailed inspection to determine if the supports that connect the bonding jumpers to the horizontal stabilizers are deformed, cracked, or ruptured; per EMBRAER Alert Service Bulletin 145-55-A025, dated June 5, 2001.

(1) If no deformation is detected, no further action is required by this paragraph.

(2) If any connecting support having deformation of 30 degrees or less has any sign of a painting discrepancy, before further flight, repaint the support per the alert service bulletin. The support must remain in the position it was found, as specified in the alert service bulletin.

(3) If any connecting support is deformed above 30 degrees or any signs of cracking or ruptures are detected, before further flight, replace the connecting support with a new support per the alert service bulletin.

(e) For airplanes subject to the requirements of AD 2001-17-04: If the inspection required by paragraph (f) of this AD is performed before the inspections specified in paragraphs (a) and (d) of this AD, it is not necessary to perform the inspections specified in paragraphs (a) and (d) of this AD.

Repetitive Inspections

(f) For all airplanes: Except as required by paragraphs (h) and (i) of this AD, within 100 flight hours after May 16, 2002 (the effective date of AD 2002-08-21), perform a detailed inspection as specified in paragraphs (f)(1) and (f)(2) of this AD, per EMBRAER Alert Service Bulletin 145-55-A028, dated April 10, 2002; or Service Bulletin 145-55-0028, Revision 02, dated February 27, 2003. If any discrepancy is found during any inspection required by this paragraph: Before further flight, perform applicable corrective actions (including replacing any discrepant part with a new part and restoring the support painting) per the alert service bulletin. Repeat the inspection at intervals not to exceed 800 flight hours, except as provided by paragraphs (h) and (i) of this AD.

(1) Inspect both bonding jumpers of the vertical-to-horizontal stabilizer to detect discrepancies (including overstretching, fraying, or other damage; and misaligned or otherwise incorrectly installed bonding jumper terminals).

(2) Inspect the connecting support structure to detect deformation or signs of cracks or ruptures, and, before further flight, inspect the general conditions of the paint of any discrepant support.

(g) Inspections done before the effective date of this AD per EMBRAER Alert Service Bulletin 145-55-A028, Change 01, dated June 7, 2002, are acceptable for compliance with the requirements of paragraph (f) of this AD.

Conditional Requirements for Immediate Inspection

(h) Notwithstanding the requirements of paragraph (f) of this AD: Before further flight following removal of any parts identified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, perform the inspection specified in paragraph (f) of this AD. The task numbers below are identified in EMBRAER Airplane Maintenance Manuals AMM-145/1124 and AMM-145/1230.

(1) The horizontal stabilizer (as specified in EMBRAER Airplane Maintenance Manual (AMM) task number 55-10-00-000-801-A).

(2) The horizontal stabilizer actuator (as specified in AMM task number 27-40-02-000-801-A).

(3) The left-hand or right-hand seal fairings (as specified in AMM task number 55-36-00-020-002-A00).

(i) Before further flight following a lightning strike, perform a "Lightning Strike–Inspection Check" and applicable corrective actions, per AMM task number 05-50-01-06.

Note 2: Following accomplishment of an inspection per paragraph (h) or (i) of this AD, the repetitive interval of the next inspection may be extended to 800 flight hours after accomplishment of the inspection required by paragraph (h) or (i) of this AD, as applicable.

New Requirements of This AD

Terminating Action

(j) Within 800 flight hours after the effective date of this AD, modify the bonding jumpers, including installing a protective cover for the elevator control cables, in accordance with Part II of the Accomplishment Instructions of EMBRAER Service Bulletin 145-55-0028, Revision 02, dated February 27, 2003. Accomplishment of this modification terminates the requirements of this AD.

(k) A modification done before the effective date of this AD per EMBRAER Service Bulletin 145-55-0028, Change 01, dated June 7, 2002, is acceptable for compliance with the requirements of paragraph (j) of this AD.

Alternative Methods of Compliance

(l) In accordance with 14 CFR 39.19, the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, is authorized to approve alternative methods of compliance for this AD.

Incorporation by Reference

(m) Unless otherwise specified in this AD, the actions shall be done in accordance with EMBRAER Alert Service Bulletin 145-55-A025, dated June 5, 2001; EMBRAER Alert Service Bulletin 145-55-A028, dated April 10, 2002; and EMBRAER Service Bulletin 145-55-0028, Revision 02, dated February 27, 2003; as applicable. EMBRAER Service Bulletin 145-55-0028, Revision 02, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1, 2	02	February 27, 2003.
3–6, 19–22	01	June 7, 2002.
7–18, 23–31	Original	May 20, 2002.

(1) The incorporation by reference of EMBRAER Service Bulletin 145-55-0028, Revision 02, dated February 27, 2003, is approved by the Director of the Federal Register, in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of EMBRAER Alert Service Bulletin 145-55-A028, dated April 10, 2002, was approved previously by the Director of the Federal Register as of May 16, 2002 (67 FR 21572, May 1, 2002).

(3) The incorporation by reference of EMBRAER Alert Service Bulletin 145-55-A025, dated June 5, 2001, was approved previously by the Director of the Federal Register as of September 5, 2001 (66 FR 43768, August 21, 2001).

(4) Copies may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Note 3: The subject of this AD is addressed in Brazilian airworthiness directive 2001-06-03R2, dated June 24, 2002.

Effective Date

(n) This amendment becomes effective on April 14, 2004.

Issued in Renton, Washington, on March 1, 2004.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04-5070 Filed 3-9-04; 8:45 am]

BILLING CODE 4910-13-P